

Application No. 09/919,670
Amendment dated March 16, 2005
Reply to Office action of February 14, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1 (currently amended): A method comprising:

- (a) establishing a plurality of logical channels over an asynchronous channel between a terminal and a gateway, wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels; and
- (b) assigning said plurality of logical channels to calls that are ~~set-up~~ set up between said terminal and said gateway.

Claim 2 (original): The method of claim 1, further comprising:

- (c) associating the calls with a plurality of bearer channels.

Claim 3 (original): The method of claim 2, wherein said associating comprises determining whether an existing bearer channel is available, and if so, associating a call with the existing bearer channel, and if not, establishing a new bearer channel and associating the call with the new bearer channel.

Claim 4 (currently amended): The method of claim 2, wherein ~~said~~ two or more of said calls can be associated with a single bearer channel selected from said plurality of bearer channels.

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Claim 5 (currently amended): The method of claim 2, wherein said plurality of bearer channels ~~includes~~ include at least one Synchronous Connection-Oriented (SCO) link.

Claim 6 (currently amended): The method of claim 2, wherein said plurality of bearer channels ~~includes~~ include at least one ~~L2CAP~~ Logical Link Control and Adaptation Protocol channel carrying voice over IP (VoIP) data.

Claim 7 (canceled)

Claim 8 (original): The method of claim 1, wherein said assigning is accomplished dynamically.

Claim 9 (canceled)

Claim 10 (original): The method of claim 1, wherein said calls comprise incoming calls, outgoing calls, and intercom calls.

Claim 11 (original): The method of claim 1, further comprising establishing an additional logical channel to handle data transfers between said gateway and said terminal.

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Claim 12 (currently amended): A method for setting up a call between a gateway and a terminal, wherein an asynchronous link is established between said gateway and said terminal, said method comprising:

(a) assigning to the call a first logical channel selected from a plurality of logical channels over the asynchronous link, wherein said terminal and said gateway exchange signaling information using said first logical channel, and wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels; and

(b) identifying a bearer channel to carry a voice signal associated with the call.

Claim 13 (original): The method of claim 12, wherein said identifying comprises determining whether to use an existing bearer channel, and if so, carrying said voice signal on said existing bearer channel, and if not, establishing a new bearer channel to carry said voice signal.

Claim 14 (original): A method comprising:

(a) establishing an asynchronous link between a terminal and a gateway;

(b) establishing a first logical channel over said asynchronous link, wherein said first logical channel carries call signaling information, and wherein said first logical channel comprises a Logical Link Control and Adaptation Protocol (L2CAP) channel; and

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(c) establishing a second logical channel over said asynchronous link, wherein said terminal accesses data stored at said gateway using said second logical channel, wherein said second logical channel comprises a Logical Link Control and Adaptation Protocol (L2CAP) channel.

Claim 15 (original): The method of claim 14, further comprising:

(d) establishing a third logical channel over said asynchronous link; and

(e) associating said third logical channel with said first logical channel, wherein said third logical channel acts as a bearer of voice over IP (VoIP) data.

Claim 16 (currently amended): A method for communicating between a gateway and a terminal, said method comprising:

(a) receiving a request to set up a call between the gateway and the terminal, wherein said call includes signaling information and a voice signal;

(b) assigning a logical channel selected from a plurality of logical channels to said call, wherein said signaling information is exchanged via said logical channel, and wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels; and

(c) associating said call with a bearer channel to carry said voice signal.

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Claim 17 (original): The method of claim 16, wherein said gateway is coupled to a network via a plurality of lines, and wherein said call is carried on one of said plurality of lines.

Claim 18 (original): The method of claim 17, wherein said network comprises a public switched telephone network (PSTN).

Claim 19 (currently amended): A system comprising:

a terminal ~~configured to establish~~ for establishing an asynchronous channel and a plurality of logical channels over said asynchronous channel, wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels; and

a gateway, coupled to said asynchronous channel, ~~configured to assign~~ for assigning said plurality of logical channels to ~~calls set up~~ calls that are set up between said gateway and said terminal.

Claim 20 (original): The system of claim 19, wherein said gateway is coupled to a network via a plurality of lines.

Claim 21 (currently amended): The system of claim 19, wherein said gateway ~~is further configured to associate~~ further associates the calls with a plurality of bearer channels, wherein

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said plurality of bearer channels are established between said terminal and said gateway.

Claim 22 (original): The system of claim 21, wherein said plurality of bearer channels includes at least one Synchronous Connection-Oriented (SCO) link.

Claim 23 (currently amended): The system of claim 21, wherein said plurality of bearer channels includes at least one ~~L2CAP~~ Logical Link Control and Adaptation Protocol channel carrying voice over IP (VoIP) data.

Claim 24 (canceled)

Claim 25 (original): The system of claim 19, wherein said calls comprise incoming calls, outgoing calls, and intercom calls.

Claim 26 (currently amended): The system of claim 19, wherein said terminal ~~is further configured to establish~~ further establishes an additional logical channel to handle data transfers between said gateway and said terminal.

Claim 27 (currently amended): A gateway in communication with a terminal device via an asynchronous channel, wherein said terminal establishes a plurality of logical channels over

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the asynchronous channel, said gateway comprising means for assigning the plurality of logical channels to calls that are ~~set-up~~ set up between said terminal and said gateway, and wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels.

Claim 28 (original): The gateway of claim 27, further comprising means for associating the calls with a plurality of bearer channels established between the gateway and the terminal device.

Claim 29 (currently amended): At least one machine readable storage, having stored thereon code for supporting communication between a gateway and a terminal, the code operable to cause performance of the operations comprising:

(a) establishing a plurality of logical channels over an asynchronous channel between the terminal and the gateway, wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels; and

(b) assigning said plurality of logical channels to calls that are ~~set-up~~ set up between the terminal and the gateway.

Claim 30 (original): The computer readable media of claim 29, wherein said method further

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comprises associating the calls with a plurality of bearer channels established between the gateway and the terminal device.

Claim 31 (new): A system comprising:

an integrated circuit for use in a terminal, said terminal for establishing an asynchronous channel and a plurality of logical channels over said asynchronous channel, wherein said plurality of logical channels comprise a plurality of Logical Link Control and Adaptation Protocol (L2CAP) channels, wherein said terminal communicates with a gateway coupled to said asynchronous channel, said gateway for assigning said plurality of logical channels to calls that are set up between said gateway and said terminal.

Claim 32 (new): The system of claim 31, wherein said gateway is coupled to a network via a plurality of lines.

Claim 33 (new): The system of claim 31, wherein said gateway further associates the calls with a plurality of bearer channels, wherein said plurality of bearer channels are established between said terminal and said gateway.

Claim 34 (new): The system of claim 33, wherein said plurality of bearer channels includes at least one Synchronous Connection-Oriented (SCO) link.

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Claim 35 (new): The system of claim 33, wherein said plurality of bearer channels includes at least one Logical Link Control and Adaptation Protocol_channel carrying voice over IP (VoIP) data.

Claim 36 (new): The system of claim 31, wherein said calls comprise incoming calls, outgoing calls, and intercom calls.

Claim 37 (new): The system of claim 31, wherein said terminal further establishes an additional logical channel to handle data transfers between said gateway and said terminal.